

REMARKS/ARGUMENTS

Claims 1-19 are pending. By this Amendment, claims 1-19 are amended. Support for the amendments to claims 1-19 can be found, for example, in original claims 1-19. The amendments to claims 1-19 are made solely to improve the clarity of the claims. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

Objection to the Claims

The Office Action objects to claims 1-3 and 7-15 as including informalities. By this Amendment, claims 1-3 and 7-15 are amended to obviate the objection. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

Rejection Under 35 U.S.C. §102

The Office Action rejects claims 1-6, 10-12 and 16-19 under 35 U.S.C. §102(e) over U.S. Patent Application Publication No. US 2004/0171868 to Geisendoerfer et al. ("Geisendoerfer"). Applicants respectfully traverse the rejection.

Claim 1 recites "[a] process for continuously preparing higher (meth)acrylic esters ... comprising ... dividing a bottom effluent from the vacuum evaporation stage into a first portion and a second portion; and recycling the first portion to the reaction apparatus" (emphasis added). Claim 2 recites "[a] process for continuously preparing higher (meth)acrylic esters ... comprising ... dividing a bottom effluent from the film evaporator into a first portion and a second portion; and recycling the first portion to the reaction apparatus" (emphasis added). Claim 3 recites "[a] process for continuously preparing higher (meth)acrylic esters ... comprising ... dividing a bottom effluent from the film evaporator into a first portion and a second portion; recycling the first portion to the reaction apparatus;

dividing a bottom effluent of the vacuum evaporation stage into a third portion and a fourth portion; and recycling the third portion to the reaction apparatus" (emphasis added).

Geisendoerfer does not disclose or suggest such processes.

The Office Action asserts that Geisendoerfer disclose a process for preparation of higher (meth)acrylic acid esters in which the bottom products of a vacuum evaporation stage and a thin-film evaporator are divided and recycled to a reaction apparatus for further transesterification. *See* Office Action, page 3. Notwithstanding this assertion, Geisendoerfer does not anticipate and would not have rendered obvious claims 1, 2 and 3.

In claims 1, 2 and 3, a portion of the bottom effluent from the film evaporator and/or the vacuum evaporation stage are recycled to the reaction apparatus. As recited in claims 1, 2 and 3, the film evaporator separates a highly pure ester product and the vacuum evaporation stage receives a bottom product remaining after separation of a highly pure ester product. The bottom products from analogous features in the apparatus of Geisendoerfer are not recycled to a reaction apparatus, but rather subjected to a residue work-up. *See, e.g., Geisendoerfer*, paragraphs [0192] to [0201]. As discussed in the present specification, this sequence of method steps in Geisendoerfer presents serious drawbacks. *See* present specification, page 10, line 24 to page 12, line 7. For example, the catalyst to be recycled in Geisendoerfer is subjected to thermal stresses that are not present in the processes of claims 1, 2 and 3. As a result, the catalyst in Geisendoerfer may be recycled in an inactive form, which leads to a loss in product yield. Also, Geisendoerfer employs superfluous effort in the disclosed process to separate polymerization inhibitors and by-products, such as high boiling by-products, significantly further increasing production costs.

In addition, Geisendoerfer does not disclose or suggest selectively recycling particular portions of the bottom effluent from the film evaporator and/or vacuum evaporation stage. *See, e.g.,* claims 7-15. The present inventors uniquely discovered that product quality could

be optimized by recycling particular portions of the bottom effluent from the film evaporator and/or vacuum evaporation stage. *See, e.g.*, present specification, page 14, lines 27 to 30.

Geisendoerfer fails to disclose or suggest the particular steps of the processes of claims 1, 2 and 3, or recognize the benefits stemming therefrom. *See, e.g.*, present specification, page 12, lines 1 to 7.

As Geisendoerfer fails to disclose or suggest that a portion of a bottom effluent from a film evaporator and/or a vacuum evaporation stage is recycled to a reaction apparatus, Geisendoerfer fails to disclose or suggest each and every feature of claims 1, 2 and 3

As explained, claims 1, 2 and 3 are not anticipated by Geisendoerfer. Claims 1-6, 10-12 and 16-19 depend variously from claims 1, 2 and 3 and, thus, also are not anticipated by Geisendoerfer. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. §103

The Office Action rejects claims 7-9 and 13-15 under 35 U.S.C. §103(a) over Geisendoerfer. Applicants respectfully traverse the rejection.

For the reasons discussed above, Geisendoerfer fails to disclose or suggest that a portion of a bottom effluent from a film evaporator and/or a vacuum evaporation stage is recycled to a reaction apparatus. Accordingly, Geisendoerfer fails to disclose or suggest each and every feature of claims 1 and 3.

As explained, claims 1 and 3 would not have been rendered obvious by Geisendoerfer. Claims 7-9 and 13-15 depend variously from claims 1 and 3 and, thus, also would not have been rendered obvious by Geisendoerfer. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

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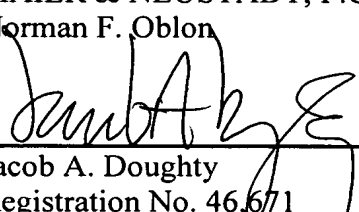
Conclusion

For the foregoing reasons, Applicants submit that claims 1-19 are in condition for allowance. Prompt reconsideration and allowance are respectfully requested.

Respectfully submitted,

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